

**GOAL** Write fractions and decimals as percents.

### VOCABULARY

*Common Percents, Decimals, and Fractions*

Fifths	Fourths	Thirds
$20\% = 0.2 = \frac{1}{5}$	$25\% = 0.25 = \frac{1}{4}$	$33\frac{1}{3}\% = 0.\overline{3} = \frac{1}{3}$
$40\% = 0.4 = \frac{2}{5}$	$50\% = 0.5 = \frac{1}{2}$	$66\frac{2}{3}\% = 0.\overline{6} = \frac{2}{3}$
$60\% = 0.6 = \frac{3}{5}$	$75\% = 0.75 = \frac{3}{4}$	
$80\% = 0.8 = \frac{4}{5}$		

### EXAMPLE 1 Writing Fractions as Percents

Write the fraction as a percent

a.  $\frac{9}{25}$

$$\begin{array}{c} 9 \times 4 \\ \curvearrowright \\ \frac{9}{25} = \frac{36}{100} \\ \curvearrowleft \\ 25 \times 4 \\ \frac{9}{25} = 36\% \end{array}$$

b.  $\frac{7}{50}$

$$\begin{array}{c} 7 \times 2 \\ \curvearrowright \\ \frac{7}{50} = \frac{14}{100} \\ \curvearrowleft \\ 50 \times 2 \\ \frac{7}{50} = 14\% \end{array}$$

### EXAMPLE 2 Writing Decimals as Percents

Write the decimal as a percent

a.  $0.24 = \frac{24}{100}$   
 $= 24\%$

0.24 is twenty-four hundredths.

b.  $0.015 = \frac{15}{1000}$   
 $= \frac{1.5}{100}$   
 $= 1.5\%$

0.015 is fifteen thousandths.

Divide the numerator and denominator by 10 to get a denominator of 100.

### EXAMPLE 3 Using Decimals to Write Percents

On a history quiz, you answered 14 out of 16 questions correctly. What percent of the questions did you answer correctly?

**Solution**

$$\frac{14}{16} = 0.875$$

Divide 14 by 16 to write the fraction as a decimal.

$$= \frac{875}{1000}$$

0.875 is 875 thousandths.

$$= \frac{87.5}{100}$$

Divide the numerator and denominator by 10 to get a denominator of 100.

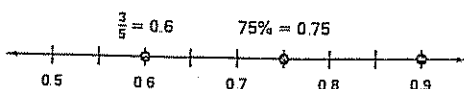
$$= 87.5\%$$

**Answer:** You answered 87.5% of the questions correctly.

### EXAMPLE 4 Using Common Relationships

Use a number line to order the numbers 75%, 0.9, and  $\frac{3}{5}$  from least to greatest.

Write the numbers as decimals and graph them on a number line.



An ordered list of numbers is  $\frac{3}{5}$ , 75%, and 0.9.